

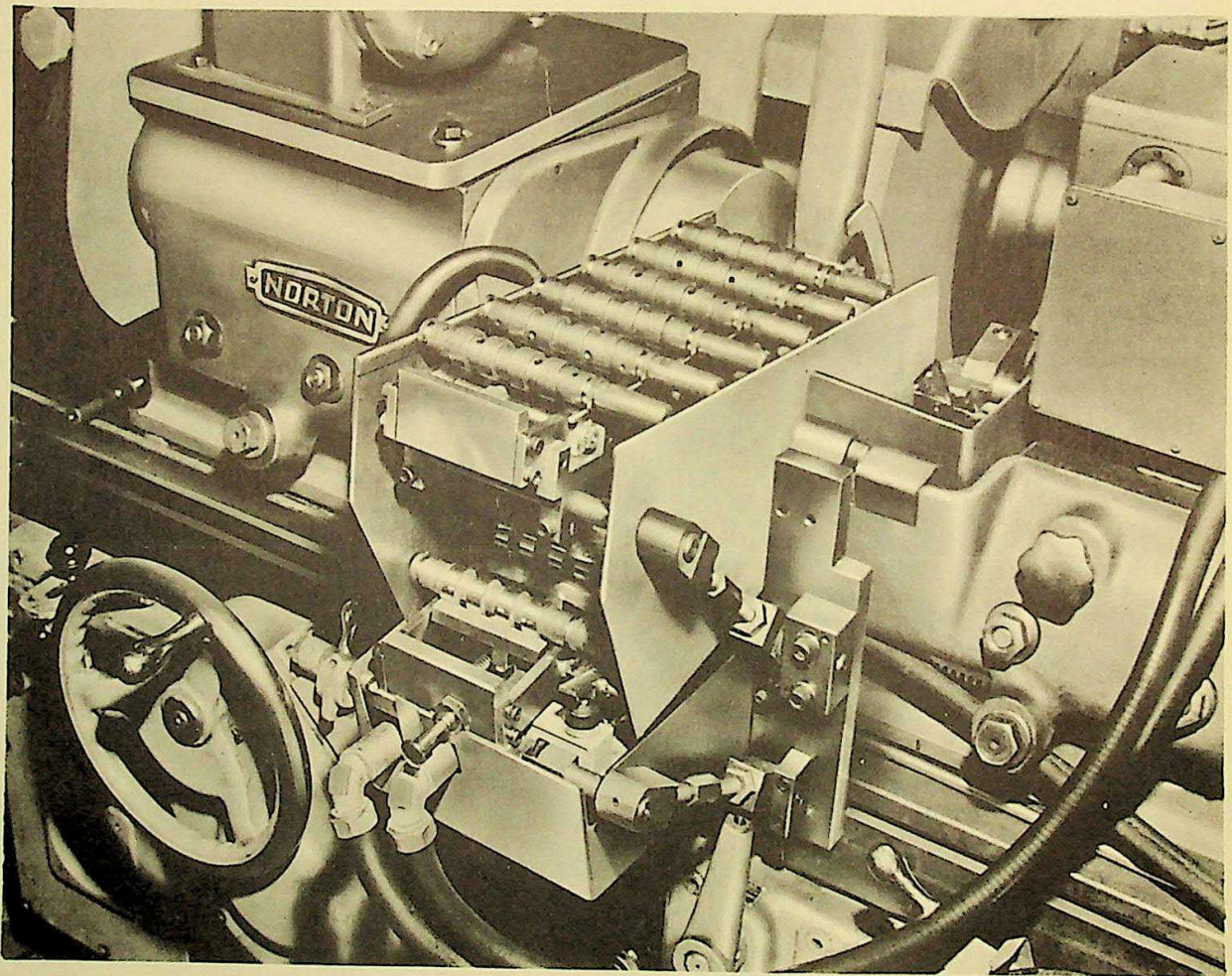
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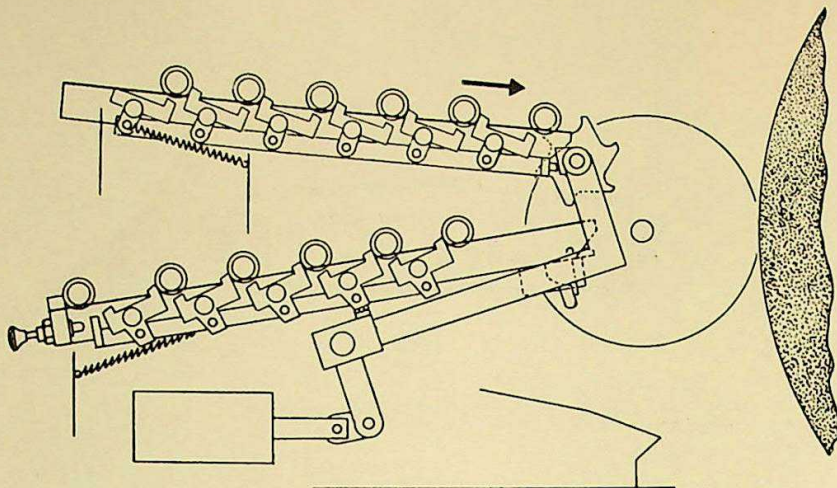


AUTOMATIC LOADING DEVICE

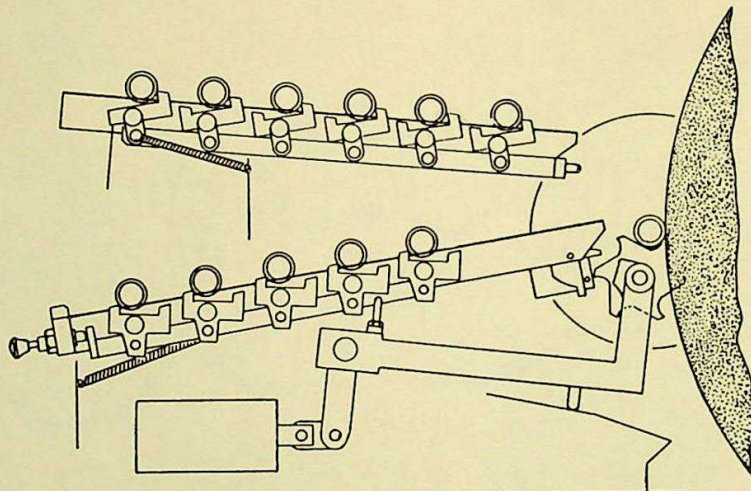


Increases Output

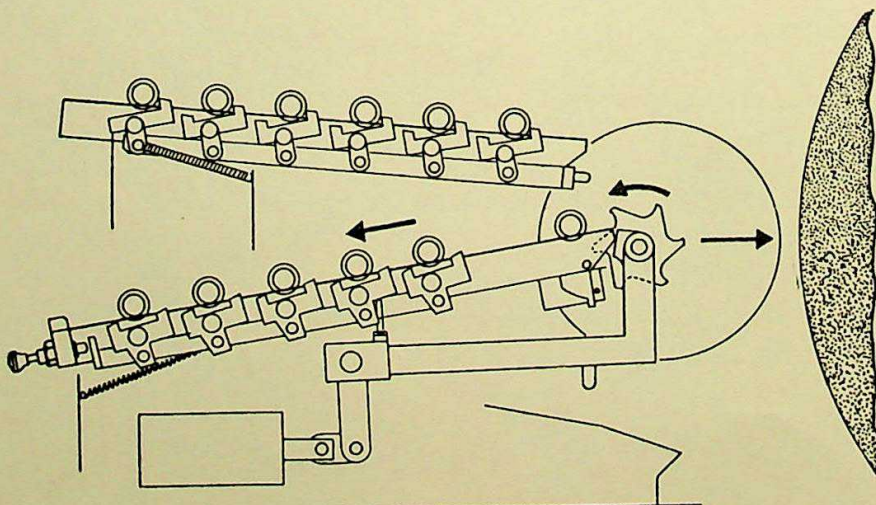
Decreases Costs



WORK BEING LOADED INTO TURRET



WORK BEING GROUND



WORK BEING UNLOADED

NORTON

AUTOMATIC LOADING DEVICE

This new Norton development, applicable to 6" and 10" Type CTU Semi-automatic Cylindrical Grinders, greatly aids achievement of highest output and lowest unit costs in grinding small shafts. It does this by providing two very important benefits - steadily paced functioning - and enabling a single operator to tend a battery of machines.

Application Range

The device illustrated in this bulletin has been designed for a specific piston-type valve. These parts must be handled carefully when ground to avoid nicking of the sharp edges. For this reason, the device has been designed for finished workpiece removal from the unloading rails by hand. The automatic loader can, however, be adapted to a variety of small shafts which can be rolled by gravity on inclined rails, and provision can be made for automatic forms of loading and unloading.

Design Features

As shown by the illustrations, the device is of the turret type supporting the work near both ends. Workpieces are placed on a loading chute consisting of a pair of rails. Latches between the rails separate the parts and are arranged so that only a single piece at a time is released to the turret. The turret is

carried on a swinging arm, the motion of which is controlled by a small hydraulic cylinder.

Operation

When a workpiece has rolled into the turret, the arm swings the turret to locate the piece in line with the work centers. The centers move forward, and as they enter the center holes of the workpiece they raise it just enough to clear the supporting fingers of the turret and permit free rotation.

After the piece has been ground to size (under electrically timed control), the turret is swung upwards. As it swings, a latch indexes the turret so that the work rolls onto the unloading rails until stopped by a latch. The turret continues its upward motion to the loading position where it receives the next piece to be ground.

Latches along both the loading and unloading rails automatically release and accept one part at a time and keep the parts separated.

Interlocking Avoids Workpiece Damage

When the automatic loader is arranged for hand unloading, the unloading rail action is interlocked so that when it is filled with six workpieces it automatically stops. This assures that finished pieces will not be spilled from the unloading rails. If no more than five pieces are permitted to accumulate, the device (and the machine to which it is applied) continue to operate automatically until intentionally stopped.
